Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Promoting Telehealth in Rural America	)	WC Docket No. 17-310

COMMENTS OF THE SATELLITE INDUSTRY ASSOCIATION

I. INTRODUCTION

The Satellite Industry Association ("SIA")[1] submits these comments in response to the Federal Communications Commission's ("Commission") above-captioned Notice of Proposed Rulemaking addressing the promotion of telehealth in rural America and improving the Rural Health Care (RHC) program to prevent fraud, waste, and abuse.[2] As a result of their unique capacity for ubiquitous, reliable, and high bandwidth broadband connectivity, satellite communications are essential in providing connectivity for health services throughout the United States, particularly in underserved and unserved communities. As the Commission considers improvements to the RHC and other Universal Service Fund (USF) programs, it should consider the vital role satellite broadband connectivity plays in improving access to healthcare services in

[1] SIA Executive Members include: AT&T Services, Inc.; The Boeing Company; EchoStar Corporation; Intelsat S.A.; Iridium Communications Inc.; Kratos Defense & Security Solutions; Ligado Networks; Lockheed Martin Corporation; Maxar Technologies; Northrop Grumman Corporation; OneWeb; SES Americom, Inc.; Space Exploration Technologies Corp.; Spire Global Inc.; and Viasat, Inc. SIA Associate Members include: ABS US Corp.; Analytical Graphics, Inc.; Artel, LLC; Blue Origin: DataPath Inc.; Eutelsat America Corp.; Global Eagle Entertainment; Globecomm; Glowlink Communications Technology, Inc.; HawkEye 360; Hughes; Inmarsat, Inc.; Kymeta Corporation; L3 Technologies; O3b Limited; Panasonic Avionics Corporation; Planet; Semper Fortis Solutions.; Telesat Canada; TrustComm, Inc.; Ultisat, Inc.; and XTAR, LLC. For more information on SIA, see www.sia.org.

[2] *See Promoting Telehealth in Rural America*, WC Dkt. No. 17-310 (December 18, 2017) ("Telehealth NPRM").

rural areas, and ensure that satellite broadband services are eligible to equitably compete for access to USF funding.

II. SATELLITE COMMUNICATIONS SERVE A VITAL ROLE IN ADVANCING BROADBAND CONNECTIVITY TO RURAL, UNDERSERVED AND UNSERVED COMMUNITIES

The Commission recently concluded that advanced telecommunication capabilities are not being deployed to all Americans in a reasonable and timely fashion.[3] Specifically, the Commission noted that there continues to be a significant disparity of access to advanced telecommunications capability across the United States with more than 39 percent of Americans living in rural areas that lack access to advanced telecommunications capability, as compared to only four percent of Americans living in urban areas.[4] As a result, Americans in rural areas are at a higher risk for receiving less services, including healthcare.[5] The RHC program can help to overcome some of the challenges to healthcare delivery faced in isolated communities. However, diverse broadband technologies, including satellite, are necessary to ensure that healthcare service providers can reach rural areas in a reasonable and timely fashion.

Due to satellites' ubiquity and versatility, satellite communications often are crucial to delivering telehealth services to undeserved and unserved communities in the United States and abroad, where terrestrial services are limited or nonexistent.[6] In a White Paper entitled "Enabling Healthcare Connectivity in the United States through Satellite Broadband," Hughes

[3] *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 31 FCC Rcd. 699, ¶ 4 (2016).

[4] *Id.*

[5] Telehealth NPRM at pg. 2.

[6] *See generally* Reply Comments of the Satellite Industry Association to the *Actions to Accelerate Adoption and Accessibility of Broadband-enabled Health Care Solutions and Advanced Technologies,* GN Dkt. No. 16-46 ("SIA Telehealth Filing") (filed June 8, 2017).

Network Systems, LLC ("Hughes"), demonstrates how these satellite networks facilitate access to broadband-enabled healthcare solutions throughout the United States through ubiquitous, cost-efficient, reliable coverage. The Hughes' White Paper highlights some of the services satellite operators are uniquely well-suited to deliver to healthcare providers, including managed cloud access, such as electronic records sharing, patient portal management, billing and compliance, in hospitals and services in support of senior care, such as remote monitoring, early detection screenings, and video conferencing doctor's appointments.[7] As importantly, satellite broadband solutions in the United States can be deployed almost immediately, in a matter of days, to on-board technologies and processes, generating instant benefits to healthcare delivery in underserved communities.

SIA members provide e-health and telemedicine services in hard to reach areas on land, in the air, and at sea. For example, in rural areas of Louisiana, Texas, and Arkansas, ViaSat has delivered broadband satellite solutions to connect widely dispersed veterans to telemedicine services. One of these programs supports veterans with mental health issues, including post-traumatic stress disorder ("PTSD") through satellite broadband technology allowing the use of Clinical Video Telehealth ("CVT") for in-home video appointments with doctors.[8] In any given fiscal year, approximately half a million veterans with a primary or secondary diagnosis of post-traumatic stress disorder received treatment from Veteran Affairs' ("VA") medical centers. Viasat's satellite connectivity allows veterans to receive health services from the comfort of their

[7] Hughes, *Enabling Healthcare Connectivity in the United States through Satellite Broadband* 4-5 (May 2017), *attached to* Letter from Jennifer A. Manner, Senior Vice President, Regulatory Affairs, Hughes Network Systems, LLC to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 16-46 (filed May 24, 2017).

[8] ViaSat, Inc., *Veterans in Rural Areas Get Connected to VA Services with New Tele Mental Health Service*, https://www.viasat.com/news/veterans-rural-areas-get-connected-va-services-new-tele-mental-health-service (last visited January 21, 2018).

own homes and eliminates travel costs and time, as veterans do not necessarily live in the proximity of a VA facility. Additionally, non-geostationary satellite constellations can increase telehealth access in underserved communities by providing high speed and low latency connectivity, including direct to end-user broadband services critical for some telehealth applications.

Satellite solutions also offer network resiliency, in the form of path diversity backup systems and backhaul capacity, ensuring reliability and strong performance for critical healthcare services regardless of whether network needs are created by predictable capacity demand spikes or unforeseen outages. SIA members offer diverse satellite options from geostationary earth orbit ("GEO") systems, to lower latency medium earth orbit ("MEO") systems, to current and future low earth orbit ("LEO") systems. These satellite systems provide telehealth broadband connectivity solutions ranging from remote video conferencing and medical data recording to providing vital communications for time sensitive emergency relief efforts and military missions.[9]

As noted by the Commission, recent hurricanes across the United States have led to Presidential emergency or major disaster declarations for seven states and two territories, severely damaging and destroying existing communication networks.[10] Satellite broadband provides enhanced network resiliency, as the vast majority of the network infrastructure is located between 435-23,600 miles above the earth's surface, making it especially reliable in times of natural and manmade disasters.[11] When terrestrial infrastructure is down or

[9] SES S.A., *SES Partners for E-Medicine Platform SATMED*, (May 27, 2014), https://www.satmed.com/news-2014-05-27.php.

[10] *See Public Safety and Homeland Security Bureau Seeks Comment on Response Efforts Undertaken During 2017 Hurricane Season*, PS Dkt No. 17-344 (December 7, 2017) ("Hurricane Response Public Notice").

[11] SIA Telehealth Filing at pg. 4.

overwhelmed due to natural disasters or other emergencies, such as the above-referenced hurricanes, relief, public safety, and military personnel rely upon satellite communications to save lives and re-establish order. This includes emergency medical services workers, who use mobile and portable satellite connectivity to help organize their response, collect and disseminate information about affected populations, and establish connectivity and temporary clinics.[12] As recently expressed by FCC Chairman Pai: "Access to reliable communications services during times of emergency is critical to enabling Americans in danger to request help and our heroic first responders to do their jobs."[13]

Following these recent hurricanes which swept through the United States as well as in the Caribbean, SIA members provided satellite services to restore communications for disaster relief and emergency response organizations at the local, state, and federal levels. These services have also allowed for the reopening of critical infrastructure, including hospitals.[14] For example, in Puerto Rico, Hughes and ResponseForce1 provided support to the San Cristobal Hospital in Ponce by deploying VSATs and solar generators to restore operations and communications at the hospital, enabling the hospital staff to order additional supplies and medications, as well as evacuate critical patients.[15] Intelsat is providing assistance to the Global Disaster Immediate Response Team ("DIRT"), an international, non-governmental organization that responds quickly in the wake of disasters to provide medical assistance, communications access, and search and rescue support. Global DIRT is using IntelsatOne Flex services, antennas and kits

[12] *Id*. at pg. 6.

[13] See Chairman Ajit Pai, September 2017 Open FCC Meeting, Presentation on FCC Response to Hurricanes Harvey, Irma and Maria, Statement (September 26, 2017), https://www.fcc.gov/document/presentation-fcc-responsehurricanes-harvey-irma-and-maria/pai-statement-0.

[14] See generally Comments of the Satellite Industry Association in PS Dkt. No. 17-344 (filed January 22, 2018) ("SIA Hurricane Response Filing").

[15] *Id*.

donated by Intelsat to support communications at multiple sites in the U.S. Virgin Islands, including a medical clinic.[16] Inmarsat's Global Xpress service also enabled first responders in Puerto Rico to communicate within minutes of arrival using its rapid mission-critical high-throughput connectivity, allowing public safety, medical and other emergency response teams to swiftly and reliably fulfill their mission.[17] Similarly, Ligado Networks worked with MISSION UNITED, a United Way of Broward County program, to deliver satellite telephone units to Puerto Rico for distribution to relief workers, community centers and church groups serving as recovery hubs. Those phones remain in service as Puerto Rico continues its recovery.[18] Non-geostationary satellites have also played a critical role in disaster relief efforts. SES' MEO constellation has used its Fast Connect solution, a rapidly deployable, fibre-like performing satellite terminal that provides high speed internet connection, to help restore connectivity in disaster-affected areas, including hurricane-ravaged Puerto Rico,[19] where nearly 95 percent of cell towers were either damaged or destroyed.[20]

[16] Intelsat, *Intelsat Supports Hurricane Disaster Relief and Recovery Operations Throughout the Caribbean and United States*, (October 23, 2017), http://www.intelsat.com/news/press-release/intelsat-supports-hurricane-relief-ops/.

[17] Inmarsat, *Inmarsat Global Xpress supports Hurricane Maria relief efforts,* https://www.inmarsat.com/news/inmarsat-global-xpress-supports-hurricane-maria-relief-efforts/.

[18] *See* Comments of Ligado Networks Comments PS Dkt. No. 17-344 (filed January 22, 2018).

[19] SES Networks, *SES Networks Works with Project Loon to Restore Connectivity in Puerto Rico,* (October 23, 2017), https://www.ses.com/press-release/ses-networks-works-project-loon-restore-connectivity-puerto-rico#R5mQwfxMpF4XMUQJ.99.

[20] TeleGeography, *Hurricane Maria Destroyed 95% of Puerto Rico's Cell Sites*, (September 22, 2017), https://www.telegeography.com/products/commsupdate/articles/2017/09/22/hurricane-mariadestroyed-95-of-puerto-ricos-cell-sites/. Chairman, Ajit Pai, reported that "Hurricane Maria has had a catastrophic impact on Puerto Rico's communications networks. For example, over 95% of Puerto Rico's wireless cell sites are currently out of service."

III. CONCLUSION

SIA's membership is proud of the central role that satellite communications continues to play as a key enabler of telehealth and general healthcare services for Americans in communities throughout the United States and abroad. As the Commission considers further policies regarding the RHC, SIA urges it to bear in mind how satellite communications are and will remain essential to achieving this goal. SIA remains readily available to work with the Commission in furthering its efforts on this matter.

Respectfully submitted,

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